

ORION

CREW EXPLORATION VEHICLE

WEEKLY ACCOMPLISHMENTS




03.19.10



Alliant Techsystems (ATK) successfully completed the second of two ground tests of a full-scale attitude control motor (ACM) for the launch abort system (LAS) at their facility in Elkton, MD (shown above and right.) The test evaluated environment extremes and ignition system robustness in addition to confirming the motor performance. This test of the control motor validates the readiness for the upcoming pad abort 1 (PA-1) flight test that will be conducted at White Sands Missile Range (WSMR), New Mexico.





 **Progress continues at the White Sands Missile Range (WSMR) in preparation for Pad Abort 1 (PA-1.)** Several milestones were reached this week including the nose cone to attitude control motor mate (shown in page 1 banner) as well as several Crew Module (CM) closeouts. The scaffolding surrounding the CM was removed (shown above) and only a few closeouts remain before the CM is ready to be moved into position for PA-1.

The Crew Module Heat Shield Installation Fixture (HSIF show right) was delivered to Kennedy Space Center this week, which will be used to install the Heat Shield to the bottom of the Crew Module. The HSIF design provides 6 degrees of freedom adjustment capability and can be adjusted to hold installation tolerances of one-thousandth of an inch. The HSIF is capable of lifting a 2,500 lb Heat Shield and the accompanying 3,500 lb shipping frame as well as a fully assembled Crew Module. The HSIF rides on a cushion of air created by 6 independent air bearing pallets. To reduce overall Program costs these tools have been designed to be easily transported among work locations. This has prevented the requirement of multiple copies of each tool and subsequent increased program expense. This tool will be shipped to the Michoud Assembly Facility (MAF) later this year for Ground Test Article (GTA) Heat Shield operations and later returned to KSC for subsequent manufacturing operations.

